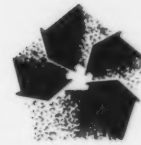


**Solid Waste Program
for the GTA**

**A PROPOSAL
FROM
THE FIVE REGIONAL CHAIRMEN
IN THE GREATER TORONTO AREA
REGARDING
A LONG-TERM PLAN FOR
THE MANAGEMENT OF SOLID WASTE**

MARCH 1989





Solid Waste Program for the GTA

HIGHLIGHTS OF THE CHAIRMEN'S PROPOSAL

OVERVIEW

- * The current landfill capacity in much of the GTA will be exhausted by 1992. That is when the new system envisioned here will be needed.
- * The proposal envisions a major, state-of-the-art system for processing solid waste. It moves beyond conventional thinking on the issue, and foresees a modern technological facility that will treat solid waste as economically valuable resource material in the industrial resource stream.
- * An innovative framework and infrastructure would be built for new research and development in the area of the 4Rs: reduction, reuse, recycling and recovery.
- * Environmental soundness would be stressed and monitored, and the real costs of degradation associated with conventional waste management systems avoided.
- * The location of any waste management sites would be determined only after a full examination of the benefits and costs to local communities, and only after full public consultations.
- * Provincial targets for waste diversion from landfill and incineration would be fulfilled: 25% by 1992 and 50% by 2000.
- * The plan recommends the establishment of a steering committee, to begin planning and to develop a call for proposals from bidders to develop and operate the comprehensive waste management system.

- * The federal government would enact legislation to reduce the volume of packaging in the waste stream. In the absence of federal initiatives, the province should act.
- * Regions would gain authority from the province to legislate stricter requirements for the separation of solid waste in households and businesses.
- * An innovative new GTA authority on waste management would be formed. It would allow maximum collaborative efforts between the municipal, provincial, and five regional GTA governments involved.
- * The proposed facility must be cost effective, and would come on stream Jan. 1, 1992, and be in use for at least 20 years.

THE NATURE OF THE PROBLEM

- * The GTA is home to four million people and the largest single concentration of Canadian industrial activity.
- * The rapid pace of both population and industrial growth, and the increased use of plastics and consumer packaging, has made the solid waste problem all the more urgent.

A SOLUTION FOR TODAY, AND FOR THE FUTURE

- * The solid waste management solution outlined in the Chairmen's proposal will include sophisticated industries receiving waste in closed containers as raw material, and processing it for addition to the manufacturing resource material streams.
- * The proposed solution includes a research institute undertaking leading-edge recovery, reduction, reuse and recycling research in well-equipped laboratories, and may include state-of-the-art facilities that produce spin-off economic activity.
- * Any proposed facility must be environmentally sound, and will be subjected to a full environmental assessment.

SAFEGUARDING OUR COMMUNITIES

- * Enterprises bidding to develop and operate the system will be required to demonstrate that the transportation system, and the ultimate treatment facility, will not intrude upon and disrupt host communities.
- * The host community will have the opportunity to operate or monitor the operations of the facility. It is expected that the various bidders will offer potential host communities employment guarantees, significant royalties, and guarantees of performance.

THE CO-OPERATIVE APPROACH

- * At present, each of the five GTA regions manages its solid waste in different ways. Some do so individually, while others cooperate with other regions.
- * We have reached a stage where there are important advantages to be gained by taking a more collaborative and comprehensive approach. The five regions would all benefit from working with each other to solve this common problem.
- * The wisdom of collaboration is dictated by the economies of scale, the high costs of state-of-the-art waste reduction technology, the regulatory convenience of a shared facility, and other factors.
- * In the event that the comprehensive system is not in place by 1992 when existing landfill capacity in the GTA will be exhausted, additional environmentally sound sites will be designated for stand-by, contingency use.

GUIDING PRINCIPLES

- * The management system of the new facility must adapt to, and keep pace with changes in, state-of-the-art technology.
- * Provincial and regional governments must monitor the system thoroughly to ensure that standards are met and that waste materials are acceptable.
- * All participating municipalities will be legally empowered to compel the separation of materials at source ("curbside").

- * There must be appropriate public consultation, information and education in developing any site.
- * The waste management system must be cost-effective.
- * A important component of the plan is to educate our society to become less wasteful, through pursuing the 4Rs: reduction, reuse, recovery and recycling.

THE PROPOSAL

- * The provincial government would delegate statutory authority, empowering regional governments to require higher standards of household and industry waste separation at curbside.
- * A new GTA agency would be established to create and control the waste management system.
- * The provincial government would be asked to give priority to applications for environmentally sound and feasible reduction, reuse, recycling and recovery projects, and to assist in finding and maintaining markets for recyclables.
- * A detailed and comprehensive call for proposals from private or public sector bidders would be developed, to design and implement the new system for the GTA.

THE PROCESS OF IMPLEMENTING THE PROPOSAL

- * A steering committee will be formed to begin the implementation of the proposal.
- * A detailed call for proposals will be developed.
- * The steering committee will assist in negotiations with a receptive community.

I INTRODUCTION

As industrialized society approaches the next century, environmental challenges have begun to take an increasingly prominent position on the public agenda. In the Greater Toronto Area, one of our most urgent environmental tasks is to find creative new solutions to the challenge of solid waste management. It is a challenge which demands cooperative effort by the federal, provincial, regional and municipal levels of government, and between the public and private sectors.

To this end, the Chairmen of the five regions in the Greater Toronto Area (GTA) -- Durham, York, Peel, Halton and Metropolitan Toronto itself -- have deliberated and agreed upon what we believe to be an innovative and far-reaching collaborative response to the problem of waste management in our rapidly growing regions.

Accordingly, the detailed proposal set out in this document outlines a long-term strategy to deal with the growing problem of solid waste management in the Greater Toronto Area. We stress that this strategy deals only with the collection and treatment of solid waste and does not include liquid or hazardous waste.

In essence, the proposal aims at the following:

- o to create a state-of-the-art system for processing solid waste;
- o to maximize industrial development opportunities for host communities;
- o to fulfill provincial targets for waste diversion of 25% by 1992 and 50% by 2000;
- o to view waste as a resource in the development and manufacturing of new products;
- o to achieve a cooperative and collaborative system that can serve as a model around the world for environmentally sound waste management systems;

- o to construct an innovative framework for new research and development in the area of reduction, reuse, recycling and recovery;
- o to reduce environmental degradation and the real costs of degradation associated with conventional waste management systems;
- o to create a waste management structure which will allow maximum collaborative efforts between municipal and regional and provincial authorities;
- o to establish an effective waste management system that best combines the efforts of the private and public sectors.

The challenge of waste management

The nature of waste management has shifted over the years to become an issue far more complex than simply finding a place to burn and bury the refuse we produce.

In the GTA, we must face the necessity of dealing with the domestic waste generated by four million people and the industrial and commercial activities of this major urban area.

Today we are more sensitive not only to the environmental problems associated with conventional landfill sites and practices, but also to the concerns raised by communities about the placement of waste management sites near their homes.

At the same time, the rapid pace of both population and industrial growth in our five regions over the last few decades and the increased use of plastics and consumer packaging has made the problem all the more urgent and dramatic.

The five GTA Chairmen believe that we must meet the challenge of waste management with the safest, most economical, effective and up-to-date technology and standards.

We believe that, as a society, we must learn to become less wasteful by educating consumers and manufacturers in the 4Rs -- reduction, reuse, recovery and recycling.

And we believe that the placement of waste management sites should be based on a full examination of the benefits and costs to local communities, and should be established only after full public consultations have been undertaken.

That is the basis for this proposed long-term, durable solution to waste management in the Greater Toronto Area.

The present situation

In all of the five Regional/Metro municipalities, solid waste from households and smaller businesses is collected by the local municipality and delivered either to a transfer station operated by the region or is transported directly to a landfill site.

The municipalities, with provincial and private sector funding, have recently launched programs for the recovery and recycling of certain materials, known as "blue box" programs, which reduce landfill volume and enhance conservation.

Municipalities also operate public awareness programs to encourage the reduction, reuse, recovery and recycling objectives established by the Province. The number of participating households and small businesses is expanding, and efforts are now being extended to include residents of apartment buildings and institutions such as schools, universities, etc. Some industries also practice the 4Rs and arrange for private solid waste disposal, which is delivered directly to municipal or privately operated landfill sites.

Specific information on present sites and capacities in each region is provided in Appendix C and in Tables I, II and Figure I.

II SHARED VISION FOR A COMMON PROBLEM

Up to now, each of the regional municipalities has adopted a somewhat independent approach to the problem of solid waste management. It is an approach commonly used throughout Ontario and most of North America, and represents the traditional method of disposing of waste materials.

We have now reached a stage, however, where there are important advantages to be gained by taking a more collaborative and comprehensive approach. These include:

- o a recognition that the economics of solid waste management have changed and the real costs of cleaning up and taking remedial measures at earlier landfill operations have been, in fact, very high.
- o an awareness that significant reductions in waste can be reached by developing state-of-the-art technology to be shared by all regional municipalities and that the combined volume of solid waste generated by our five regions justifies the cost of facilities and technologies;
- o the opportunity to reduce costs substantially through the economies of scale that can be achieved in cooperative efforts and through creative private and public sector relationships;

- o avoiding the duplication of each region seeking separate approvals for individual sites;

III GUIDING PRINCIPLES

Given these benefits, the five Chairmen have come to the conclusion that a collaborative approach to the long-term management of solid waste is a desirable goal. We are therefore proposing such an approach, within the framework of the following principles:

- o Waste is a resource which should be recycled and reused as many times as possible. This will ensure its sustainability and the sustainability of the society that uses the resource.
- o A solid waste management system must be environmentally sound, incorporating state-of-the-art technology and a commitment to adapt as technology advances. It must be monitored continuously by the province to ensure that all environmental requirements and standards are satisfied, and by participating municipalities to ensure the acceptability of waste by regulation and inspection during collection and transfer.
- o Hazardous or liquid waste will not be accepted.
- o The proposed waste management system will incorporate techniques for reduction, reuse, recycling and recovery to the greatest extent possible, with only residual waste going to landfill sites. It will also require that all participating municipalities receive enabling provincial legislation to require multi-material source separation. There must also be a provincial commitment to give priority to applications for environmentally sound and feasible reduction, reuse, recycling and recovery projects and to assist in finding and maintaining markets for recyclables.
- o A major component of the waste management system will be increased management of industrial and commercial waste in accordance with the 4Rs.
- o The federal government should enact legislation to reduce the volume of packaging in the waste stream. In the absence of such action, the province should do so.
- o The potential host community in which a waste management facility may be established must receive significant long-term benefit including payment and ongoing revenue for land utilization, permanent and perpetual care of the facility and waste management recovery and research facilities. In addition the host community will participate in the planning

and management of the facility, including rehabilitation of the site when no longer required.

- o The process of developing a waste management system must provide for appropriate public consultation, information and education.
- o The waste management system must be cost-effective.

The implementation of a Greater Toronto Waste Management program will require the involvement of many different organizations in the public and private sectors.

It is clear, however, that the public will continue to hold all elected representatives accountable for collecting, managing and disposing of waste materials in an environmentally safe way, with a minimum of inconvenience, risk and nuisance.

The public will also expect to have the process managed in such a way that program costs are in the hands of public authorities, and that adequate expenditure controls are achieved for projects and processes that are contracted out to the private sector.

Since the proposal envisages a uniquely comprehensive waste management program, the Chairmen believe it is imperative to set up a structure that is clearly accountable and that carries the necessary mandate and expertise to implement a cost-effective and efficient organization.

Defining an appropriate structure will be one of the priorities of the Steering Committee which is proposed below.

IV THE PROPOSAL

Recognizing that the challenge of effectively and economically dealing with the waste management needs of the Greater Toronto Area requires a collaborative and comprehensive approach, the Chairmen of the five area regional municipalities have developed a proposal, outlined below, which is to be simultaneously presented to our respective Councils.

This proposal takes into account the enormous scale and complex nature of what must be achieved to deal with an area that is home to over four million people, and the centre of industrial activity in Canada.

It explicitly acknowledges that any solution to the problem of solid waste management must be environmentally sound and must deal with the consequences of an affluent consumer society and a

thriving industrial sector. It should also confront the sources of the problem, namely the behaviour of our industries and of the individual consumer, and the problems associated with contemporary packaging trends.

Further, this proposal recognizes that state-of-the-art recycling technology means that solid waste can now be considered -- and should be considered -- as a resource with positive economic value. With this in mind, we are now proposing a long-term, durable solution to managing the solid waste of the Greater Toronto Area. It consists of the following elements:

1. Delegation by the Province to regional governments of statutory authority to require of industries, businesses and households increased standards of waste separation.
2. The establishment of a new GTA approach to create and control a waste management system involving state-of-the-art technology in reduction, reuse, recycling and recovery of solid waste, and the disposition of residual waste in innovative new facilities;
3. A recommendation to the provincial government to give priority to applications for environmentally sound and feasible reduction, reuse, recycling and recovery projects and to assist in finding and maintaining markets for recyclables.
4. The development of a call for proposals from private or public sector bidders to develop and implement an appropriate, long-term, comprehensive solid waste management system for the GTA.

This next section, and the relevant Appendices, outline the activities we believe must be undertaken to bring such a system into being as quickly as possible.

The steps involved are:

1. Formation of a Steering Committee to manage implementation;
2. Development of a detailed Call for Proposals to potential public or private sector project contractors that spells out clearly the objectives of the proponent municipalities, the methods for evaluating proposals, and recommending the components of an appropriate system;
3. Development of the appropriate management structure to manage the resulting contract or system;
4. Assisting in negotiations with a receptive community;
5. Development of contingency plans for the short term.

Detailed information on each of these elements of this proposal is contained in Appendix A.

Environmental Responsibility Maintained

The Chairmen understand that the key to the Province's willingness to endorse the proposed GTA Solid Waste Management strategy is the marked progress it represents to achieve the provincial recycling targets to reduce our society's waste.

The provincial targets for waste diversion of 25% by 1992 and 50% by 2000 are ambitious but deemed to be achievable. The commitment to a minimum landfill strategy and to a fully engineered and safe system is of considerable importance. The commitment to fund solid waste research from the tipping fees is also critical.

The Province must maintain a vigilant regulatory presence to ensure the environmental soundness of all undertakings, and the Chairmen fully support the Province in this regard.

Accordingly, the successful bidders for the proposed comprehensive waste management system will be expected to submit all data, information and evidence necessary for an exhaustive environmental assessment under the Environmental Assessment Act.

The Province will maintain continuous monitoring of the facilities and will require the proponents to insure acceptability of waste through regulation and inspection during collection and by enroute inspection at transfer stations.



APPENDIX A

PROPOSED PLAN OF ACTION

1. Formation of a steering committee

The Chairmen reviewed the potential methods available to manage the further development of the proposal.

In our view, the concept of a legislated joint special purpose body for managing the proposed comprehensive waste management system is attractive because it would provide clarity and focus, and has known precedents, for example the Toronto Area Transit Operating Authority (TATO) and the Metro Toronto and Region Conservation Authority (MTRCA).

Until the exact nature of the system ultimately called for is known, it is difficult to know the appropriate nature of such a body. It would also take some time to draft the appropriate legislation and have it debated and passed by the Provincial Legislature.

Given the urgency of the current situation, the municipalities do not have the luxury of waiting. It is therefore proposed that the participating municipalities, as soon as possible, enter into an agreement to operate under a joint steering committee to be known as the Solid Waste Interim Steering Committee.

The steering committee would be authorized to:

1. Develop a call for proposals, evaluate the proposals, negotiate with proponents and recommend the appropriate solid waste management system for the period beginning in January of 1992 and continuing for at least 20 years.
2. Prepare for the necessary environmental assessments, Municipal board hearings and other procedural stages of approval.
3. Recommend an appropriate structure to manage the venture for the proponents. (This would appear to be a Joint

Solid Waste Management Authority established by Provincial Legislation.)

4. Develop contingency plans in conjunction with each participating municipality to provide for any period which may occur between the exhaustion of GTA land fill capacity and the start-up of the new system.
5. The Steering Committee would assist bidders to identify communities that may be interested in the employment and financial benefits associated with major recycling and reuse industries, which will be part of any successful bid for a solid waste management system. State-of-the-art techniques and technologies for waste reduction and recycling will be put in place both in the regions and at a landfill site.
6. Retain such consultants or employees as may be necessary to fulfill this mandate subject to certain financial controls.

It is proposed that the Solid Waste Interim Steering Committee consist of:

- o The Chairmen of each participating region;
- o One other elected representative from each region;
- o The Provincial Deputy Minister for Greater Toronto Area;
- o A chairperson selected by the members.

Approximate committee deadlines

- | | |
|---|----------------|
| o Steering Committee Composed and Authorized by | April
14/89 |
| o RFP issued by | June
15/89 |
| o Permanent Management Structure Proposed | July
21/89 |
| o Bids on RFP close | Oct.
2/89 |
| o Evaluations Complete | Dec.
31/89 |

- | | | |
|---|--|---------------|
| o | Approval of Recommended System by Province
and Municipalities | Jan.
19/90 |
| o | Contracts Awarded | Feb.
23/90 |

Detailed call for proposals

Work is currently underway detailing the terms and conditions under which a call for proposals could be made. The enterprise to be undertaken is a large scale, environmentally sensitive works involving a large number of potential proponents proposing a variety of technologies and a variety of locations.

The terms of reference, evaluation criteria and process of calling for proposals for such complex work must be crafted with care and technical expertise. Accordingly, it is expected that the call-for-proposal document will not be available until mid-May, 1989.

See Appendix B for an outline of the proposed bidding specifications in the request for proposals.

The management structure

In order to manage the GTA solid waste management strategy, it will be necessary to create an appropriate joint management structure. There are numerous options.

Accordingly, the Solid Waste Interim Steering Committee would be asked to explore the management structure options and make recommendations on an appropriate structure by mid-summer. This will provide sufficient implementation time.

Assisting in negotiation with receptive communities

The logistics of solid waste management often engender negative reactions. While most people readily acknowledge the need for environmentally sound methods to dispose of society's waste, they are reluctant to accept, much less volunteer for, a landfill site in their neighbourhood.

In the case of the Greater Toronto Solid Waste Management strategy, there is an opportunity to follow a very different course.

The facilities will include sophisticated industries receiving waste in closed containers as raw material, processing same for additions to the manufacturing resource material streams. They will include a research institute undertaking leading-edge reduction, reuse and recycling and recovery research in well-equipped laboratories. They may include state-of-the-art

facilities that produce spin-off economic activity. While all facilities may not be located in the same community as a landfill site, many may well be.

Any landfill site established under this proposal will have been subject to a full environmental assessment and will be environmentally sound. The site will be equipped with leachate capture and treatment systems. The bidders will be required to demonstrate that the selected transportation method is non-intrusive to the host community. Perhaps most significantly, the host community will have the opportunity to operate or monitor the operation of the facility. Finally, it is anticipated that the various bidders will offer potential host communities employment guarantees, significant royalties and guarantees of performance.

The proposal requires that a bidder demonstrate that the potential host community supports the bid. It may be necessary for the regions and the province to offer support and assistance to potential host municipalities to help them evaluate the merits of proposals made to them as bidders.

In addition the regions and the province may wish to encourage municipalities with areas which are appropriate for a solid waste management facility to become bidders themselves, or offer to be part of one or more bidding consortia.

Finally, it may be necessary to survey municipalities to determine the conditions under which areas may be willing to become hosts.

While the proposal is based on bidders achieving agreement with potential host communities, it is conceivable that none will come forward. In this case the regions and a successful bidder will have to conduct a traditional site search to nominate sites for approval.

Accordingly, it is proposed that the Solid Waste Interim Steering Committee, as part of its mandate, develop strategies to:

- o Assist bidders to find receptive communities;
- o Assist interested communities to attract bidders;
- o Assist interested communities to evaluate bidders' proposals to them;
- o Assist municipalities that wish to become bidders to do so;
- o Develop a contingency plan for a site search in case no acceptable site is found by the bidders.

APPENDIX B

PROPOSED ITEMS TO BE INCLUDED IN CALL FOR PROPOSALS

Given the complex and comprehensive waste management system which is envisioned in this proposal, the bidding specifications in the Request for Proposals to be issued by the Interim Steering Committee will necessarily be very detailed and extensive.

This Appendix is intended to provide an overview of the areas the specifications must address, and some of the items it must contain.

PART I - OBJECTIVES

This part would detail in clear, and definitive terms the objectives to be met by the call-for-proposals. These include:

- o Recycling, reduction, reuse and recovery targets both at curb side and at site;
- o Environmental criteria;
- o Elimination of objectionable characteristics associated with some traditional systems (excessive truck traffic, noise, windblown litter, dust, unsightliness, odour, attraction of birds and animals);
- o Outline of the GTA Waste Management Strategy.

PART 2 - BACKGROUND MATERIALS

This part would contain extensive information that might be important to bidders. All relevant information must be supplied to ensure equitable treatment of bidders. This would include:

- o A description of the existing solid waste management system, and of the need for a new system beginning in 1992;
- o Projected type and quantities of materials to be handled by the bidders from the principal generation areas over the life of the contract.
- o Definition of materials and targets for recycling by the five Regions and their member municipalities.
- o The role of the Steering Committee or its successor, individual municipalities and the Province in assisting bidders win approval for their proposal for potentially affected communities and regulatory bodies.

PART 3 **Information Required From Bidders**

This part would list very precisely the essential information required for each distinct component of the bids. The following is an example of the type of requirements to be placed on bidders:

- o Full description of the proposed system based on using the best available and economically achievable technology, with flexibility to incorporate components from other bidders and to delete any component from bid;
- o A list of environmental impacts that would be assessed and a description of them;
- o Definition of the receiving points in the five regions to the proposed system;
- o Resolution of Council of host municipality confirming their willingness to be the host municipality for bidders' proposed facility;
- o Description of lands and services which would have to be acquired in addition to those already owned by the bidder.
- o Relative location of waste reduction facility to landfill facility (if any) and method of operation and scale and method of funding of research facility (preference given to location in host municipality of disposal facility).

- o Minimum lifetime of facility from start-up to be 20 years. The bidder may propose a longer time frame.
- o A reduction in waste to meet provincial targets of 50% by the year 2000. (This assumes generating municipalities will achieve 15% reduction in wastes for disposal by 2000.)
 - stipulates percentage reduction by year, to year 2000
 - method of measurement
 - preference will be given to proposals which can demonstrate that higher percentage reductions will be achieved earlier.
- o Penalties
 - for not achieving percentage reduction (plus bonus for exceeding) and
 - for failure to complete system on time.
- o Description of end products and projected selling price from the waste reduction facility, and marketing details. The bidder will be responsible for sale of the end products, although some assistance in this area may be provided.
- o Contingency plans in the event of failure of the proposed system due to weather; labour problems; mechanical difficulties; basic design; etc.
- o Description of the degree and nature of host municipality participation in management of facilities within its jurisdiction.
- o Provisions for continuous monitoring of the system (in addition to Regulatory Authorities monitoring).
- o Maintenance and safety programs and anticipated life of each component.
- o End use and "perpetual" care.
- o Employment, specifying location, as a result of the proposed system.
- o Schedule for construction and implementation of the system, resources proposed and infrastructure facilities to be used.
- o Statutory declaration and covenants by bidders to comply with requirements of the RFPs.

- o Method of contract arbitration for any dispute between the Regions and bidder.
- o Submission date.
- o Number of copies of submission.
- o Contact person/procedures for answering questions during bidding.
- o Bid Bond and Contingency Allowance.

PART 4 Environmental Assessment Act Approvals

This part would detail the full requirements of the Environmental Assessment Act, and require the bidder to define the bid and submit to such evaluation.

- o Pertinent legislation and its application to the project would be explained.
- o The role of the five Regions (or the Solid Waste Authority, if one exists) will be detailed as a co-proponent with the bidder.
- o The bidder must submit detailed description of how approvals will be obtained including:
 - program of activities
 - schedule of events
 - anticipated costs to proponents including the costs to be borne by the five Regions (or Authority)
 - professional estimate of level of confidence in obtaining approval based on net environmental impacts/benefits and estimate of time frames
 - public participation program.

PART 5 Experience of Bidder

This part would require detailed descriptions of the experience of the bidder, the proposed technologies and all personnel involved in the proposal.

- o Bidder's experience in solid waste management, recycling and reuse of municipal wastes;
- o Demonstrate capabilities, reliability and environmental acceptability of each component of

the proposed system, and the system as a whole, with examples of similar technology and systems.

- o Experience of any subconsultants and the personnel proposed for operation of the system and their respective roles (with back-ups).

PART 6 Price Proposal

This part would itemize in clear detail the pricing arrangements proposed by the bidder. Given the size, nature and length of the proposed arrangements, very considerable detail on pricing, escalation clauses and variations are required.

- o Cost per tonne, with detailed breakdown, for receipt of wastes delivered by the five Regions, in current dollars exclusive of any provincial and federal funding or grants. Bidders indicate separately the impact that funding or grants would have on their proposal. Cost should be all-encompassing and include any and all permits, taxes, etc. Each component of the system should also be separately costed on the assumption that only that component would be selected from the bid.
- o Basis for adjustment for inflation in operating costs (e.g. CCPI or Transportation Index) with projections for life of system.
- o All capital costs to be provided by Private Sector.
- o Details of financial arrangements and assurity (including liability insurance, for earthquake, environmental, etc.).
- o Details of perpetual care fund
- o Share of costs to five Regions for EAA approvals.
- o Land utilization payment to be made to host municipality.
- o Haulage costs
- o Financial auditing procedure based on:
 - full disclosure to five Regions through "open books" financial audit statements

- five Regions' control of any changes to ownership and pricing.
- o Procedure for approvals of changes and costs to system due to development of new technologies or markets.

PART 7 Ownership of Systems and Facilities

In this part each bidder would be asked to make a variety of different proposals to provide for public equity participation options. These could range from zero to 100% - in the latter case virtually a public utility.

- o Proposal for five Regions to purchase system when built and operating
- o Proposal for five Regions to lease, or lease with purchase options, the system.
- o There will be no change in ownership without the approval of the five Regions.

PART 8 Evaluation of Proposals and Negotiating Rules

This part would contain a description of timing, how proposals will be evaluated, and basis for selection of preferred proposal (or rejection of all proposals without compensation to the bidder), including need for subsequent meetings to clarify proposals. All materials submitted to become the property of the five Regions.

It may be necessary to carry out more in-depth evaluations of more than one proposal to choose the preferred proposal.

It may be necessary to conduct negotiations in order to add or delete components of one bid to components of others to select the most desirable total system.

PART 9 Qualified Bidder

This part will make clear that any public or private sector entity or joint venture may be a bidder. Canadian content preference and applicable law will be detailed.

APPENDIX C

WASTE MANAGEMENT SITES AND CAPACITIES IN THE FIVE GTA REGIONS

As the attached tables make clear, there is sufficient landfill capacity available in the Greater Toronto Area to meet anticipated waste volumes until approximately 1992. It is acknowledged, however, that significant management challenges must be overcome in this situation.

After 1992, even with the recycling targets being met, current capacity will be exhausted, and the new comprehensive system envisioned in this proposal will be needed to deal with solid waste.

Each of the five regions in the GTA manage their solid waste in different ways. Some do so individually, while others do so in conjunction with other regions.

Through agreements and cooperative understandings, solid waste from certain municipalities in both York and Durham are handled in common landfill. These landfills are operated by Metro.

The cooperative understanding with the Region of Durham is for Metro's use of a landfill (Brock West) located in Durham for which privilege Metro compensates Durham and provides Durham with waste and other disposal services.

The agreement with the Region of York is formal and obliges Metro to accommodate the landfill needs of the region. The landfill which Metro operates in York accommodates Metro solid waste as well as that generated in York itself.

The Regions of Peel and of Halton do not participate in any mutual agreement either between themselves or with Metro or York, with the exception of some minor exchanges which are practicable and mutually advantageous.

The Region of Peel is currently using a landfill in its constituent municipality of Mississauga (Brittania landfill). It is currently considering alternative sites as required to comply with the

Environmental Assessment Act and has received approval before the Consolidated Hearings Board to operate energy from waste (EFW) incinerators within its boundaries.

The Region of Halton is presently without a landfill site within its boundaries and exports solid waste to private landfills in Hamilton Wentworth and Region of Niagara. It also exports waste for incineration to Niagara Falls, New York. It has recently completed a master planning process and has received approval from the Joint Board to use a new landfill site it has identified. It is anticipated that this could be available for use in late 1992.

Table 1 (attached) identifies existing landfill sites in each Region and quotes the capacity remaining. It also identifies the shortfall or surplus capacity, by region, as of January 1, 1992.

In Halton, there is currently a shortfall of capacity. The same situation will occur in mid-1990 at the Durham, Metro and Peel sites.

Table II shows current generation rates, current landfill diversion quantities and projected municipal recycling ratios.

Table I

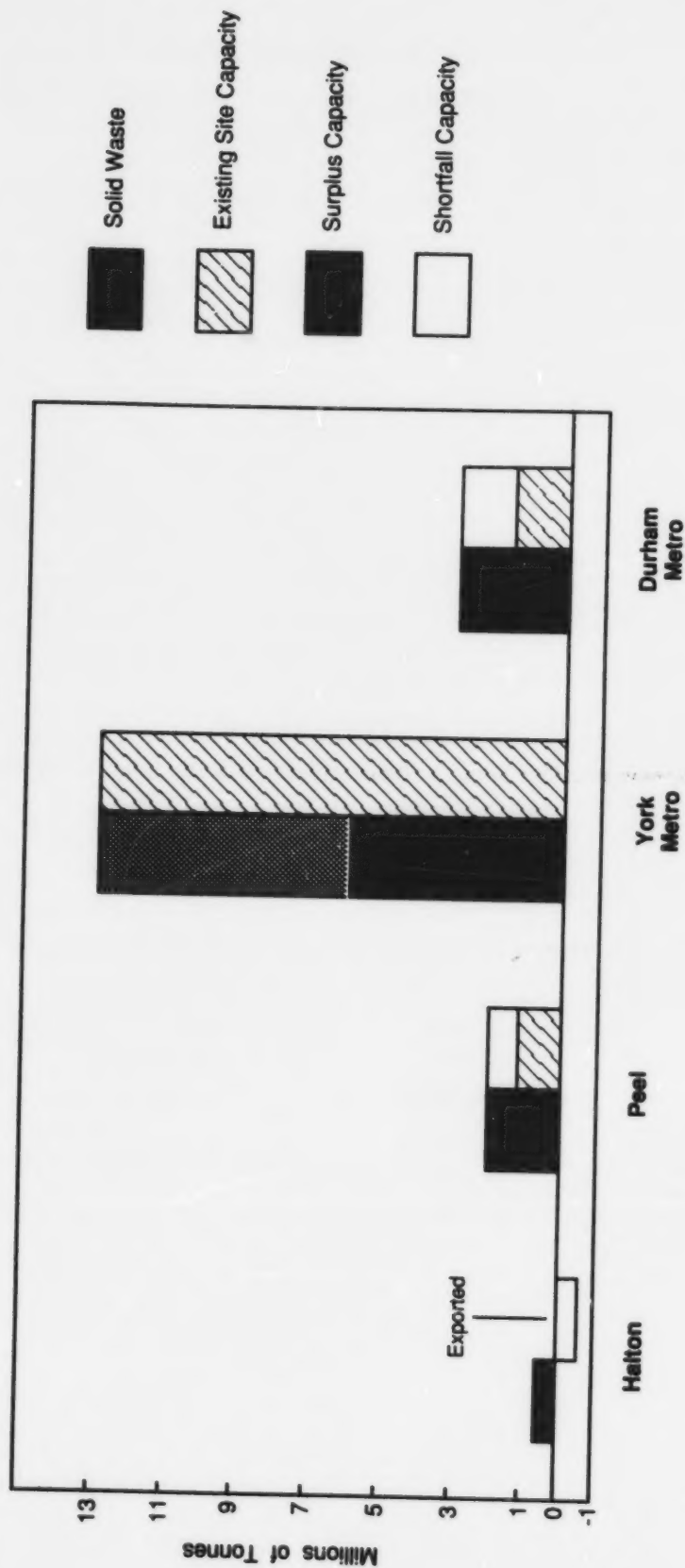
Landfill Capacities February 1989 to January 2, 1992 (x million Tonnes)					
Region	Waste for Disposal 1989-1991 (Incl.)	Site	Remaining Site Capacity (as of Feb.'89)	Projected Site Closure Date	Projected Net landfill Capacity (as of Jan.1, '92)
Halton	0.6	None	N/A	N/A	None Halton exports 0.6 in this period
Peel	2.0	Britannia Road	1.2	May 1990 (by agreement)	-0.8 (Shortfall)
York Metro	6.0	Keele Valley	13.0		7.0 Surplus
Durham Metro	3.0	Brock West	1.5	mid 1990	-1.5 (Shortfall)

Table II

Current generation rates, recycling quantities and recycling targets				
Region	Current Waste Generation	Current Landfill Diversion	Projected Municipal Recycling	
	Thousands of Tonnes/yr.		Percentage	
			1989	1990
Durham	326	20	6.1	12
Halton	236	37	15.9	19.0
Peel	762	80	10.5	13.1
York	523	19	4.0	6.0
Metro	2500	156	6.3	12.5

Landfill Capacities **February 1989 to January 2, 1992** (x million Tonnes)

Figure 1



APPENDIX D

CONTINGENCY PLAN

1990-92

As outlined in Appendix C, the GTA has sufficient landfill capacity until 1992. It will be necessary to make changes and adjustments in waste disposal practices as various sites reach capacity, starting in 1990 with Brock west. It will also be essential to redouble recycling efforts, to reduce the waste flow by 25% by 1992.

Nevertheless, the physical capacity to manage GTA waste exists until 1992 and the appropriate bilateral arrangements can be made to utilize this capacity. The available capacity will inevitably be utilized during this period even if bilateral arrangements are not made.

1992-1996

Some of the parties expressing interest as bidders believe they have proposals which are simple, efficient and involve no environmentally difficult issues. They believe that such a facility can be brought into operation by 1992.

Some of the proposals, however, anticipate that it may take longer before a comprehensive system can be put into place to handle the entire GTA waste stream. Bidders may therefore have to utilize more conventional landfill techniques to manage the solid waste between 1992 and 1996.

It is clear to us that the GTA cannot be in a position such that in 1992 there is no environmentally safe place to put waste. The prospect of illegal dumping and emergency sites is not tolerable, and no risk of that occurring is acceptable.

Accordingly, we believe it is necessary to develop an alternative, stand-by plan for disposing of GTA waste between 1992 and the latest time when the new system could begin operation.

If a bidder is found who is able to manage the waste during this period in an environmentally approved way, this plan will not be needed. However, the plan should be kept in place to insure against any interruption of the new system for whatever reason.

Stand-By Plan

To this end, it is proposed that each region put forward one environmentally sound landfill site, which may be used in the event that there is a gap between exhaustion of current capacity and start-up by the successful bidders.

The proposed contingency plan has been discussed by the Chairmen and, if adopted, we believe it will be acceptable to the provincial government. It is proposed that it operate as follows:

1. Each region will nominate potential contingency landfill capacity on a site or sites believed to be environmentally capable of accommodating landfill. While there is no explicit limit on the amount of capacity to be nominated, it is understood that the GTA requires four or five years of contingency capacity. Accordingly, any site nominated should be of sufficient size to contribute meaningfully to the needed capacity.
2. This capacity may be provided from existing approved landfill sites, expansion of existing sites or creation of new sites.
3. Each region will nominate the proposed capacity in this calendar year and those that propose to nominate largely untested sites will nominate as expeditiously as possible.
4. Where a region has an approved site or a proposed site well advanced in the environmental approval stages, it may reserve a portion of the capacity sufficient for ten years waste from that region.
5. Should it prove necessary to implement the contingency plan, it is proposed that all nominated and environmentally approved sites made available under the plan (except as noted in 4 above) as well as all waste generation, diversion and transportation, shall be managed on an inter-regional basis, not on the basis of regional boundaries.
6. Each region will finance the undertakings necessary to bring its contingent capacity to approval. Should the site be used these costs can be charged against the users in proportion to the amount of contingency capacity that each region uses. All costs of operating the contingency sites can also be charged to the user regions.

7. A land utilization fee (recommended by the Steering Committee) shall be paid to the region where the site is located by the regions using the site. This will be based on the amount of waste deposited on the site.
8. The host municipality may charge a tipping fee to any party using the contingency site other than the GTA regions in excess of its costs plus land utilization fee.
9. A host region shall have the option of operating an alternative site on behalf of all users.
10. Each region shall be responsible for transporting its waste to the alternative site.
11. All regions will undertake all reasonable measures including recycling, reuse, reduction and recovery of solid waste, to divert waste. The regions accept as a target the achievement of a 25% diversion by 1992 and a 50% diversion by 2000.

Further, the Chairmen of the GTA regions understand that the Province agrees to support the implementation of the proposed contingency plan as follows:

1. The Province will submit the nominated contingency sites to a detailed, exhaustive and public environmental suitability examination. It will issue a certificate of approval for the use of the contingency site without reference to other possible sites provided that:
 - A) all environmental standards are met;
 - B)
 - i) the nominating region is actively participating in the GTA solid waste disposal strategy and intends to use the site only as a contingency site in the event that there is a gap between the exhaustion of current approved capacity and the operation of the strategy facilities.
 - ii) the nominating community is external to the GTA but is offering the site as part of the GTA solid waste contingency plan.
2. The Province clearly states that it will agree to these contingency provisions because it is persuaded of the merits of the proposed GTA solid waste strategy, wishes to avert any potential environmental crisis, and is satisfied that the proposed process provides sufficient environmental safeguards for time limited usage. It will not permit the contingency

plan approval process to be used for landfill sites for regions which do not join the GTA solid waste management strategy, nor for sites to be operated for any purpose other than as a contingency to bridge to the facilities provided through the strategy.

3. The Province will provide financial assistance for the development and operation of the contingency plan and sites, in accordance with its normal grants programs for solid waste.
4. The Province shall undertake all reasonable measures to ensure the availability of markets for recycled materials.
5. The Province will bear all costs incurred by the current Chairmen's Committee or the successor committee until June, 1989.



LAKE ONTARIO

THE GREATER TORONTO AREA